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ABSTRACT

"The Survey of Reading and Study Efficiency" (SR/SE), which is used to diagnose and prescribe learning skills, requires careful training before it is administered. To address this need, a comprehensive multi-media program was designed to orient practitioners in the rationale and background of the SR/SE. The training program has five characteristics: it is rigorous, systematic, mathemagenic, cybernetic, and media-based. The first step in developing the program was to outline the objectives. The program was next organized into sub-categories which were analyzed to determine which combination of media and personnel would best achieve the objectives. The completed program consists of print media, slides, and cassettes, in combination with personnel. The mathemagenic ("learning by doing") aspect of the program provides "hands on" experience for the learner. The cybernetic aspect is included for two reasons: evaluation and improvement of the program, and learner verification and/or clarification. Finally, a multi-media approach was selected because it facilitates duplication of those aspects of the training process that remain static. (FL)

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A MULTI-MEDIA TRAINING PROGRAM FOR PRACTITIONERS OF THE SR/SE

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Introduction

In 1971, Frank Christ (5:32) defined learning assistance as a "systems approach to reading and study skills counseling", and in 1972 he established and developed a Learning Assistance Center at California State University, Long Beach. Within its first year of operation, the CSULB Learning Assistance Center had been visited by 3,500 students. In the 1976-1977 academic year, the number of student contacts had increased to 53,000. In order to assess the reading and study skills needs of this large student population, Learning Specialists at CSULB use the Survey of Reading and Study Efficiency (SR/SE), designed by Christ (3).

The SR/SE is used to diagnose and prescribe learning skills

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problems in five areas: (4)

Study Management

Major Course-related Skills

Auxiliary Course Skills

Attitudes, Interests, & Habits

Physiological Aspects

The SR/SE requires careful training of skills practitioners if it is to be administered with integrity to both the survey and the learner. To address this training need a comprehensive, multi-media program was designed and produced to orient the practitioner regarding the rationale and background of the SR/SE. In addition, the program provides training and experience in the areas of administration, diagnosis, prescription, and follow-up procedures.

The training program

The training program has five characteristics: it is rigorous, systematic, mathemagenic, cybernetic, and employs media.

The rigor of the training unit is predicated on the belief that professionalism requires a commitment to the learner, demonstrated by dedication to effort as well as to principle. A conscientious utilization of the SR/SE demands that the practitioner be an expert if the instrument is to be employed with integrity.

The systems approach was selected for the training program because it is potentially both rigorous and consistent. Speagle

(17:329), of Drexel Institute of Technology, stated that the systems approach in training "produces qualified human resources for the educational enterprise."

The training program is based on a systems approach as defined by the Department of Audiovisual Instruction Commission (1:76):

> An integrated programed complex of instructional media, machinery, and personnel whose components are structured as a single unit with a schedule of time and sequential phasing. Its purpose is to insure that the components of the organic whole will be available with the proper characteristics at the proper time to contribute to the total system, and in doing to fulfill the goals which have been established.

The first step in developing the program was to outline the objectives. The criteria was simple: what skills should the Learning Specialist be able to demonstrate upon completion of the training? The importance of this primary step to the overall development and coordination of training is supported by Cogan (6:25), Director of Research Design and Reporting for the Human Resources Research Organization (Alexandria, Virginia):

> Carefully defined system objectives are the first step and the main essential for a systems analysis. Objectives pinpoint the "mission" so that a set or sets of functions and their arrangements into an operating pattern can be directed to doing exactly what the system is supposed to do.

The second step in developing the training program was to organize it into sub-categories, then analyze each category to determine which combination of media and personnel would most efficiently and effectively assist in achieving the objectives.

The completed program consists of print media, slides, and cassettes, in combination with personnel.

In an article published in the American Educational Research Journal (1966), Rothkopf (15:241) described modes of learning, and coined the term "mathemagenic" to denote learning by doing.

> The roots of the new word are mathema: learning, that which is learned and gignesthai: to be born. This seems an appropriate reference to a class of responses which give birth to learning.

The rationale at CSULB for the mathemagenic aspect of the training unit is based upon research by Gagné (13:11), who stated that learning involving a response to real objects must utilize those objects at some point in the instruction. Gagné (12:64) also stated that instructional effectiveness is enhanced when the learner is involved in "doing something with his just-acquired knowledge -- transforming it, applying it, using it." Gagné's opinion is substantiated by Davies (7), a commissioner in the U.S. Office of Education, in an article in which he stressed the need to train educators in the use of modern educational technology.

This "hands on" experience is accomplished by assigning a series of sequential tasks, arranged by appropriate modalities: to confer; to read; to view; to listen; to respond; to test. Each task is prefaced in the training manual by a symbol that is used to assign and verify completion of the tasks.

The following excerpt is reprinted from the training manual for practitioners:

TO DO: Ask the training director for the following items:

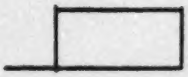
___1. A copy of the SR/SE

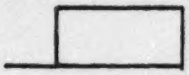
___2. SR/SE Response Pad

___3. SR/SE Profile form

___4. Slide/cassette program: "Taking the SR/SE"

___5. A pencil or ballpoint pen if you don't have one

TO VIEW:  Slide/cassette program: "Taking the SR/SE"

TO DO:  Take the SR/SE and enter the results on the SR/SE Profile form, following the instructions you hear and see in the slide/cassette program.

TO VIEW: Slide/cassette program: "Entering the SR/SE Profile into the Computer"

TO DO: View the slide/cassette program again ("Entering the SR/SE Profile into the Computer"). This time stop the program whenever you wish to record the operational steps on the computer schematic.

The "cybernetic", or feedback aspect of training is included for two reasons: evaluation and improvement of the training unit, and learner verification and/or clarification.

The rationale for evaluation of the training program, through its cybernetic component, is supported by the writing of Banathy (2:82), who specified that cybernetic data is vital "for the purpose of making adequate adjustments in the system." Banathy's statement was echoed by Devirian (8:52), in a report

that specified the need and rationale for a cybernetic component within learning assistance programs. Devirian stated that "improved data collection, analysis, and subsequent changes within the system are required for improved accountability." The feedback necessary for evaluation and change in the training project is accomplished through frequent, informal conferences between the trainer and the trainee.

Learner verification, a term introduced by Thiagarajan (19:26) in his article, "Learner Verification and Revision" What, Who, When, and How?", which outlined the guidelines by which learner verification is appraised and tested, is accomplished in the training unit in three ways: 1) conferences with the training director; 2) written responses; and 3) observing the performance of the trainee.

Conferences are specified at regular intervals in the training manual, but are also encouraged on an informal level, whenever needed. The conferences are directed at answering questions that may arise, clarifying aspects of procedure, philosophy, or training that may be unclear, and offering encouragement and perspective for the trainee who might sometimes feel overwhelmed by what is taking place.

One example of written response is the test that follows the reading of the SR/SE Instructors' and Counselors' Manual (4). The trainee reads the manual, then responds to questions which test his/her comprehension of key concepts.

An example of verification through observable performance is

the task of entering a profile into the computer terminal. After viewing the slide/cassette unit detailing the task, the trainee views the unit a second time, stopping the program whenever necessary to enter the correct step-by-step procedure on a schematic. The trainee then enters a profile into the computer terminal, using the schematic as a guide. If the computer refuses to accept the entry, or terminates the entry during the process, the situation is examined to determine the cause, on the assumption that there could be an error on the schematic.

A multi-media approach was selected for the training unit because it facilitates duplication of those aspects of the training process that remain static, a view also expressed by Ryan (16:23) in his article on teacher training and technology. The use of slide/cassette media makes it possible to slow down those aspects of the training which would otherwise be too fleeting. Media is also capable of storing and presenting material that is too time-consuming to present each time -- an opinion supported by Hoban (14) and Evans (11).

The justification of a multi-media approach is corroborated by Stuck and Mannat (18) in a study comparing the learning of eighteen concepts of law by a traditionally taught group to the learning of the same concepts by a group utilizing an audio-visual-tutorial method. Based on pre- and posttest scores, Stuck and Mannat concluded that the audiovisual-tutorial group showed significant gains over the traditionally taught group. In 1968 Edwards, Williams, and Roderick (10) conducted a study

in which they compared the performance of college students learning business machines skills. The control group was taught in the traditional manner and the experimental group was taught in an audiovisual-tutorial laboratory. The results of the final performance test demonstrated that the audiovisual-tutorial group learned significantly more than the control group. A second study was conducted by Edwards, Williams, and Roderick (10), comparing the typing performance of a traditionally taught group to that of a group taught in an audiovisual-tutorial laboratory. At the end-of-semester performance test, the students who learned typing in the audiovisual-tutorial laboratory significantly outperformed the group which had been trained by traditional methods.

Summary

Professionalism on the part of skills practitioners requires more than the sincere desire to assist students with their learning skills; the practitioner must be rigorously trained to administer, diagnose, prescribe, and follow through with student needs. Such professionalism can be facilitated through a training program which is multi-media, and includes mathemagenic and cybernetic components, and is systematic and rigorous, yet makes allowances for human interaction.

1. Alphabetical Listing of Terminology. In D. P. Ely (Ed.) Audiovisual Communication Review (Vol. 11, No. 1, Supp. 6). January 1963, 76.

2. Banathy, B. H. Instructional Systems. Palo Alto, California: Fearon Publishers, 1968, 82.

3. Christ, F. L. The Survey of Reading/Study Efficiency. Chicago: Science Research Associates, Inc., 1968.

4. Christ, F. L. The Manual for Instructors and Counselors of Reading/Study Efficiency. Chicago: Science Research Associates, Inc., 1968.

5. Christ, F. L. Systems for Learning Assistance: Learners, Learning Facilitators, and Learning Centers. In F. L. Christ (Ed.) Interdisciplinary Aspects of Reading Instruction WCRA Proceedings, 1971, 4, 32-41.

6. Cogan, E. A. Systems Analysis and the Introduction of Educational Technology in Schools. In S. G. Tickton (Ed.) To Improve Learning (Vol. 2) New York: R. R. Bowker Company, 1971, 25-37.

7. Davies, D. Training Personnel for Roles in Instructional Technology. In S. G. Tickton (Ed.) To Improve Learning (Vol. 2) New York: R. R. Bowker Company, 1971, 359-364.

8. Devirian, M. Data Collection: A Cybernetic Aspect of a Learning Assistance Center. In G. Kerstiens (Ed.) Reading Update: Ideals to Reality WCRA Proceedings, 1974, 7, 51-58.

9. Devirian, M. Survey of Functions of Learning Programs in California's Two- and Four-Year Public Colleges and Universities. In G. Kerstiens (Ed.) Reading Update: Ideals to Reality WCRA Proceedings, 1974, 7, 63-69.

10. Edwards, R. K., Williams, M. L., and Roderick, W. W. An Experimental Pilot Study to Explore the Use of an Audio-visual-tutorial Laboratory in the Secretarial Offerings at the Community College Level in Michigan. Lansing, Michigan: Lansing Community College, 1968. (ERIC Document Reproduction Service No. ED 027 387)

11. Evans, R. N. et. al. Instructional Technology and Vocational Education. In S. G. Tickton (Ed.) To Improve Learning (Vol. 2) New York: R. R. Bowker Company, 1971, 681-690.

12. Gagne, R. M. Learning Theory, Educational Media, and Individualized Instruction. In S. G. Tickton (Ed.) To Improve Learning (Vol. 2) New York: R. R. Bowker Company, 1971, 61-74.

13. Gagne, R. M. Media and the Learning Process. Houston, Texas, 1968. (ERIC Document Reproduction Service No. ED 022 368).

14. Hoban, C. F. Instruction as a Systematic Approach to Instructional Technology. In S. G. Tickton (Ed.) To Improve Learning (Vol. 2) New York: R. R. Bowker Company, 1971, 131-138.

15. Rothkopf, E. Z. Learning From Written Instructional Materials: An Exploration of the Control of Inspection Behavior by Test-like Events. American Educational Research Journal, November 1966, 3, 241-249.

16. Ryan, K. Teacher Training in Instructional Technology. In S. G. Tickton (Ed.) To Improve Learning (Vol. 2) New York: R. R. Bowker Company, 1971, 375-387.

17. Speagle, R. E. Systems Analysis in Education. In S. G. Tickton (Ed.) To Improve Learning (Vol. 2) New York: R. R. Bowker Company, 1971, 327-336.

18. Stuck, D. L., and Manatt, R. P. A Comparison of Audio-tutorial and Lecture Methods of Teaching. Journal of Educational Research, 1970, 63, 414-418.

19. Thiagarajan, S. Learner Verification and Revision: What, Who, When, and How?. Audiovisual Instruction, January 1976, 18-19.